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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/821,821

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J. Daren Bledsoe

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BRINKS HOFER GILSON & LIONE/MARVELL

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EXAMINER

RODRIGUEZ, LENNIN R

ART UNIT

PAPER NUMBER

2625

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/821,821

Applicant(s)

BLEDSOE ET AL.

Examiner

LENNIN R. RODRIGUEZ

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 7/30/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 19 have been considered but are moot in view of the new ground(s) of rejection. Applicant's newly added limitations required further search from the examiner.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-4 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh (US 5,734,483) in view of Spears et al. (US 7,333,250) and Yamamoto et al. (US 6,943,922).

(1) regarding claim 1:

Itoh '483 discloses a scanner (column 1, lines 15-18), comprising:

a housing (column 3, lines 46-48);

a transparent platen atop the housing for receiving an object to be scanned (column 2, lines 48-54, where glass has to be transparent in order to let the scanner scan the document);

a carriage (14 in Fig. 2) comprising:

a light source for illuminating the object (column 4, lines 27-29);

Itoh '483 discloses all the subject matter as described above except a carriage operable to travel along a first direction and a second direction, wherein the first and second directions are not co-linear and are within a plane that is substantially parallel to the transparent platen,

However, Spears '250 teaches a carriage (Fig. 3A, where the rotational motor in combination with belts and rotating tabs carry the photosensor array and column 4, lines 8-34) operable to travel along a first direction and a second direction, wherein the first and second directions are not co-linear and are within a plane that is substantially parallel to the transparent platen (column 4, lines 21-34, where the carriage moves in a first direction 310, and a second direction to the right which both are parallel to the platen atop),

Having a system of Itoh '483 and then given the well-established teaching of Spears '250 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 reference to include a carriage operable to travel along a first direction and a second direction, wherein the first and second directions are not co-linear and are within a plane that is substantially parallel to the transparent platen as taught by Spears '250 reference because in this way an image scanner will have movable photosensor array that can be moved in two dimensions in a plane (column 1, lines 44-45), thus consuming less power and effort to performed the scanning.

Itoh '483 and Spears '250 disclose all the subject matter as described above except a rectangular photodetector array for simultaneously detecting light intensity of

multiple scan lines, the rectangular photodetector array comprising more than three rows of photodetectors.

However, Yamamoto '922 teaches a rectangular photodetector array for simultaneously detecting light intensity of multiple scan lines, the rectangular photodetector array comprising more than three rows of photodetectors (Fig. 3 and column 2, lines 45-67 to column 3, lines 1-4, where the photodetector has 2 or more lines, thus including the 3 or more condition of the limitation).

Having a system of Itoh '483 and Spears '250 and then given the well-established teaching of Yamamoto '922 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 and Spears '250 to include a rectangular photodetector array for simultaneously detecting light intensity of multiple scan lines, the rectangular photodetector array comprising more than three rows of photodetectors as taught by Yamamoto '922 reference because in this way it will cover more area of the document to be scanned at once, thus consuming less power and effort to performed the scanning.

(2) regarding claim 19:

Itoh '483 further discloses a scanner (column 1, lines 15-18), comprising:

a housing (column 3, lines 46-48);

a transparent platen atop the housing for receiving an object to be scanned (column 2, lines 48-54, where glass has to be transparent in order to let the scanner scan the document);

illumination means for illuminating the object (column 4, lines 27-29);

carriage means supporting the illumination means and the light intensity detection means for transporting the illumination means and light intensity detection means (column 7, lines 8-18, where the carriage 14 moves along a document line).

Itoh '483 discloses all the subject matter as described above except transporting the illumination means and light intensity detection means in a first direction and a second direction, wherein the first and second directions are not co-linear and are both within a plane that is substantially parallel to the transparent platen.

However, Spears '250 teaches transporting the illumination means and light intensity detection means in a first direction and a second direction, wherein the first and second directions are not co-linear and are both within a plane that is substantially parallel to the transparent platen (column 4, lines 21-34, where the carriage moves in a first direction 310, and a second direction to the right which both are parallel to the platen atop),

Having a system of Itoh '483 and then given the well-established teaching of Spears '250 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 reference to include transporting the illumination means and light intensity detection means in a first direction and a second direction, wherein the first and second directions are not co-linear and are both within a plane that is substantially parallel to the transparent platen as taught by Spears '250 reference because in this way an image scanner will have

movable photosensor array that can be moved in two dimensions in a plane (column 1, lines 44-45), thus consuming less power and effort to performed the scanning.

Itoh '483 and Spears '250 disclose all the subject matter as described above except light intensity detection means for simultaneously detecting light intensity of multiple scan lines;

However, Yamamoto '922 teaches light intensity detection means for simultaneously detecting light intensity of multiple scan lines (column 5, lines 40-44);

Having a system of Itoh '483 and Spears '250 and then given the well-established teaching of Yamamoto '922 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 and Spears '250 to include light intensity detection means for simultaneously detecting light intensity of multiple scan lines as taught by Yamamoto '922 reference because in this way it will cover more area of the document to be scanned at once, thus consuming less power and effort to performed the scanning.

(3) regarding claims 2 and 21:

Itoh '483 further discloses wherein the carriage further comprises:

a mounting plate having a horizontal guide (16 in Fig. 3), the light source (column 4, lines 27-29) and the rectangular photodetector array being mounted on the mounting plate (column 9, lines 13-18);

a first motor linked to a first gear (column 6, line29, motor **29**); and

a horizontal carriage bar defining a horizontal guide channel for receiving the horizontal guide and a horizontal gear channel for receiving the first gear, the first motor

being operable to drive the first gear to move the carriage along the horizontal direction (column 6, lines 22-32).

(4) regarding claims 3 and 22:

Itoh '483 further discloses the horizontal carriage bar has vertical guides (column 6, lines 39-42);

the carriage further comprises a second motor linked to a second gear (column 6, lines 51-54, motor 36); and

the housing defines vertical guide channels for receiving the vertical guides and a vertical gear channel for receiving the second gear, the second motor being operable to drive the second gear to move the carriage along the vertical direction (column 6, lines 33-49).

(5) regarding claims 4 and 23:

Itoh '483 discloses all the subject matter as described above except wherein the light source comprises a ring of light emitting diodes formed around the rectangular photodetector array.

However, Yamamoto '922 teaches wherein the light source comprises a ring of light emitting diodes formed around the rectangular photodetector array (column 3, lines 66-67 and column 4, lines 1-7).

Having a system of Itoh '483 and then given the well-established teaching of Yamamoto '922 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 reference to include a ring of light emitting diodes formed around the rectangular

photodetector array as taught by Yamamoto '922 reference because in this way it will cover more area of the document to be scanned at once, thus consuming less power and effort to performed the scanning.

(6) regarding claim 20:

Itoh '483 discloses all the subject matter as described above except wherein the light intensity detection means comprises an array of photodetectors having at least three rows of photodetectors.

However, Yamamoto '922 teaches wherein the light intensity detection means comprises an array of photodetectors having at least three rows of photodetectors (Fig. 3 and column 2, lines 45-67 to column 3, lines 1-4, where the photodetector has 2 or more lines, thus including the 3 or more condition of the limitation).

Having a system of Itoh '483 and then given the well-established teaching of Yamamoto '922 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 reference to include light intensity detection means comprises an array of photodetectors having at least three rows of photodetectors. as taught by Yamamoto '922 reference because in this way it will cover more area of the document to be scanned at once, thus consuming less power and effort to performed the scanning.

4. Claims 5 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh (US 5,734,483) and Yamamoto et al. (US 6,943,922) as applied to claims above, and further in view of Hergeth (US 6,888,083).

(1) regarding claims 5 and 24:

Itoh '483 and Yamamoto '922 disclose all the subject matter as described above except wherein the rectangular photodetector array comprises a complementary metal oxide semiconductor (CMOS) image sensor array.

However, Hergeth '083 teaches wherein the rectangular photodetector array comprises a complementary metal oxide semiconductor (CMOS) image sensor array (column 2, lines 45-56).

Having a system of Itoh '483 and Yamamoto '922 and then given the well-established teaching of Hergeth '083 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483 and Yamamoto '922 reference to include that the rectangular photodetector array comprises a complementary metal oxide semiconductor (CMOS) image sensor array as taught by Hergeth '083 reference because in this way it will cover more area of the document to be scanned at once, thus consuming less power and effort to performed the scanning.

5. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh (US 5,734,483), Yamamoto et al. (US 6,943,922) and Hergeth (US 6,888,083) as applied to claims above, and further in view of Rich et al. (US 4,865,038).

(1) regarding claims 6 and 25:

Itoh '483, Yamamoto '922 and Hergeth '083 disclose all the subject matter as described above except wherein the light source comprises light emitting diodes located on a die, and the rectangular photodetector array is also located on the die.

However, Rich '038 teaches wherein the light source comprises light emitting diodes located on a die, and the rectangular photodetector array is also located on the die (column 3, lines 15-41).

Having a system of Itoh '483, Yamamoto '922 and Hergeth '083 and then given the well-established teaching of Rich '038 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the scanner system of Itoh '483, Yamamoto '922 and Hergeth '083 reference to include light emitting diodes located on a die, and the rectangular photodetector array is also located on the die as taught by Rich '038 reference because in this way it will make the carriage more compact, thus saving space in the scanner for easier movement.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LENNIN R. RODRIGUEZ whose telephone number is (571)270-1678. The examiner can normally be reached on Monday - Thursday 7:30am - 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

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